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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,212	11/22/2006	Valerie Frankard	1187-30	2213
28349 7590 08/17/2009 DILWORTH & BARRESE, LLP 1000 WOODBURY ROAD SUITE 405 WOODBURY, NY 11797				
EXAMINER				
COLLINS, CYNTHIA E				
ART UNIT		PAPER NUMBER		
1638				
MAIL DATE		DELIVERY MODE		
08/17/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/583,212

Applicant(s)

FRANKARD ET AL.

Examiner

Cynthia Collins

Art Unit

1638

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,9 and 11-28 is/are pending in the application.
- 4a) Of the above claim(s) 1-3 and 15-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4,5,9 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Election/Restrictions

The Amendment filed April 27, 2009 has been entered.

Claims 6-8, 10 and 29-34 are cancelled.

Claims 4, 9 and 11 are currently amended.

Claims 1-5, 9 and 11-28 are pending.

Claims 1-3 and 15-28 are withdrawn.

Claims 4-5, 9 and 11-14 are examined.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

All previous objections and rejections not set forth below have been withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11, and claims 12-14 dependent thereon, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 11 is indefinite in the recitation of “preferably a prolamin promoter”, as it is unclear whether and under what conditions a prolamin promoter would be preferred.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 4-5 and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by INZE et al.

I (WO 03/085115, published 16 October 2003).

Claims 4-5 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by INZE et al.

II (U.S. Patent Application Publication US 2005/0221290, published October 6, 2005 and filed April 8, 2003).

The claims are drawn to a method for improving plant growth characteristics, said method comprising introducing and expressing in a plant an isolated nucleic acid molecule encoding a GRUBX protein, said GRUBX protein consisting of the amino acid sequence set forth in SEQ ID NO:2, including a method wherein said nucleic acid molecule encoding a GRUBX protein is overexpressed in a plant, including a method wherein said nucleic acid molecule is set forth in SEQ ID NO: 1.

INZE et al. I and II teach a method comprising introducing and expressing or overexpressing in a plant a nucleic acid molecule isolated from the plant *Nicotiana tabacum* that comprises the nucleotide sequence set forth in SEQ ID NO: 1, and that encodes a protein consisting of the amino acid sequence set forth in SEQ ID NO:2 (See INZE et al. I and II SEQ

ID NO:61; INZE et al. I page 12 lines 4-19 and page 13 lines 23-26; INZE et al. II paragraphs [0060], [0063], [0067], [0068], [0069]; see also the sequence alignments below). While INZE et al. I and II are silent with respect to whether their method is “for improving plant growth characteristics”, INZE et al. I and II need not explicitly teach this limitation in order to anticipate the claimed invention, since the recitation in the preamble of claim 4 is an intended use for the claimed method, and thus not limiting.

```
RESULT 2
ADF38002
ID   ADF38002 standard; cDNA; 1729 BP.
XX
AC   ADF38002;
XX
DT   12-FEB-2004 (first entry)
XX
DB   Synchronised tobacco BY2 cDNA sequence SEQ ID NO:61.
XX
KW   identification; validation; plant; agrochemical; gene; ss.
XX
OS   Nicotiana tabacum.
XX
PU   WO2003085115-A2.
XX
PD   16-OCT-2003.
XX
PF   08-APR-2003; 2003WO-EP003703.
XX
PR   10-APR-2002; 2002EP-00447062.
PR   15-JUL-2002; 2002US-0396124P.
XX
PA   (CROP-) CROPPDESIGN NV.
XX
PI   Inze D, Broekaert W;
XX
DR   WPI; 2003-604308/75.
XX
PT   Identifying and validating plant genes or proteins as targets for
PT   agrochemicals, useful for producing agrochemical-resistant plants,
PT   comprises determining and down regulating the gene or protein expression
PT   profiles of a plant.
XX
PS   Claim 12; SEQ ID NO 61; 183pp; English.
XX
CC   The present invention describes a method for identifying and validating
CC   plant genes/proteins as targets for agrochemicals comprising determining
CC   the gene or protein expression profiles of a plant and downregulating the
CC   expression of the gene or protein in the plant or plant cell. Also
CC   described: (1) methods for screening candidate agrochemical compounds,
CC   comprising the use of the above method or the use of any of the 785 fully
CC   defined nucleotide sequences (ADF37942 to ADF38726) or protein sequences,
CC   or their homologues, functional fragments or derivatives; (2) a method
CC   for producing an agrochemical resistant plant, comprising the use of the
CC   above-mentioned nucleotide or protein sequences; (3) an isolated nucleic
CC   acid that is identified by any of the above methods or that comprises at
CC   least a part of a nucleic acid sequence chosen from any of the 785
CC   nucleotide sequences given in the specification; (4) a plant tolerant to
CC   an agrochemical, in which the expression level of one or more of the
CC   nucleic acid sequences given in the specification is modulated; and (5) a
CC   harvestable part of the plant described above. The method is useful in
CC   identifying and validating plant targets for agrochemicals or in
CC   producing an agrochemical resistant plant. The nucleic acid or protein
CC   can be used as a target for an agrochemical compound, particularly
CC   herbicide. The present sequence represents a synchronised tobacco BY2
CC   cDNA nucleotide sequence which is used in the exemplification of the
CC   present invention.
SQ   Sequence 1729 BP; 527 A; 301 C; 391 G; 510 T; 0 U; 0 Other;
```

Art Unit: 1638

Alignment Scores:
 Pred. No.: 1,47e-206 Length: 1729
 Score: 2310.00 Matches: 459
 Percent Similarity: 100.0% Conservative: 0
 Best Local Similarity: 100.0% Mismatches: 0
 Query Match: 100.0% Indels: 0
 DB: 2 Gaps: 0

US-16-583-212-2 (1-459) x ADF38002 (1-1729)

Qy 1 MetGlyAspMetLysAspLysValLysGlyPheMetLysLysValThrSerSerSerSer 20
 Db 276 ATGGGTGACATGAAGTAAAGTCAAGGGTTCATGAAAGGTCACATCTCTCTCTCA 335
 Qy 21 GlyLysPheLysGlyGlnGlyArgValLeuGlyGlySerSerSerSerGlyProSerAsn 40
 Db 336 GGTAAAGTTTAAAGCCAAAGGTAGGGTTTGGTGGTTCATCTCTCAGGACCCCTCAAT 395
 Qy 41 HisValAsnAsnPheSerSerHisProLeuAsnThrArgGlnAspGlnGlnProSerTyr 60
 Db 396 CATGTCAATATTTTTCATCACATCCCTAAATCAAGGCCAAGATCAACAACCTTCATAT 455
 Qy 61 ThrLysThrSerProGlnLysProSerAsnSerAspGlnArgIleGluAsnIleCysGlu 80
 Db 456 ACAAAAACCTTCGCTCAAAAACCAAGTAATCTGATCAAGAAATGAGAAATATATGTGA 515
 Qy 81 IleGlnPheAsnLysSerGluSerLysAspGlyPheAspProPheGlyGluLeuValThr 100
 Db 516 ATTCAAGTCAACAAAGGTGAATCAAGAGATGGTATTGATCAATTTGGTGAATTAGTCACT 575
 Qy 101 SerGlyLysArgAsnProLysGlyTyrSerLeuValGluValLysCysProValCys 120
 Db 576 TCTGGGAGAGAAACCAAGGGTATTCACTTACTAATGTGTGAAATGCCCTGTCTGT 635
 Qy 121 GlySerGlyPheValSerGluGluGluValSerThrHisIleAspSerCysLeuSerSer 140
 Db 636 GGTAGTGGTGGTTTCTTCTTCAAGAGAGGTGTCAACTCATATGATAGCTGTTAAGTCT 695
 Qy 141 GluValSerSerAsnLeuGlyValGluSerGlyValGluValLysValGluGluGluThr 160
 Db 696 GAAGTGTCTTCTAATTTGGGAGTTGAAAGTAAAGTTGAAGTAAAGTGAATTTGAAACA 755
 Qy 161 CysValSerAlaTyrValSerGlyLysProSerGluGlySerValGluValValIleLys 180
 Db 756 TGTGTAGTGCATATGTTCAGGGAAGCCCTCAGAAAGGTGAGTGAAGTGGTCATTAA 815
 Qy 181 LeuLeuLysAsnIleValLysGluProGluAsnAlaLysPheArgLysIleArgMetGly 200
 Db 816 TTGTTAAGAAATATGTGAAGAACCCAGAGATGCCAAGTTAGGAAATAGAGATGGG 875
 Qy 201 AsnProLysIleLysGlyAlaIleGlyAspValValGlyGlyValGluLeuLeuGluPhe 220
 Db 876 AATCCAAAAATAAAGGTGCTATAGGTGATGTTGTAGGAGGAGTGGAGCTATTGGAATT 935
 Qy 221 ValGlyPheGluLeuLysGluGluGlyGlyGluIleTrpAlaValMetAspValProSer 240
 Db 935 GTTGGATTGAGTTGAAAGAAAGAGTGGGAAATTTGGCTGTGAGGATGTTCTCTCT 995
 Qy 241 GluGluGlnLeuValMetLeuLysAsnValValSerLeuLeuGluProLysLysValGlu 260
 Db 996 GAAGAACCACTTGTATGCTTAAGAAATGAGTTTCACTCTTGAACCGAAGAGTTGAA 1055
 Qy 261 GluLeuAlaSerLeuSerGlnValLysAlaSerGluProValGluProLysLysIleAsp 280
 Db 1056 GAGTTGGCTCTTATCTCAAGTTTAAAGCGAGTGAACAGTTGAGCCGAAGAGATGAT 1115
 Qy 281 ArgGlnIleArgValPhePheSerValProGluSerValAlaLysIleGluLysAla 300
 Db 1116 AGACAGATTGAGTGTCTTCTTCTTCTGTTCCGAGAGCGTACGACAAAAATGAGCTACT 1175
 Qy 301 AspSerPhePheAsnLeuSerArgGluGluLeuArgArgGluAlaGluMetArgLysLys 320
 Db 1176 GATTCCTCTTTTAACTCTCACTGTGAGGAAATGAGAGAGAGAGAGATGAGGAGAG 1235
 Qy 321 LysLeuGluAspSerLysLeuLeuProLysSerTyrArgGluLysGlnAlaLysAla 340
 Db 1236 AAAATAGAAAGATTCCAAATATTGATTCCTAAATCTTATCGGAAAGCAGGCAAAAGCT 1295
 Qy 341 AlaArgLysLysTyrThrLysSerIleIleArgValGlnPheProAspGlyAlaLeuLeu 360
 Db 1296 GCAAGAAAGAGTACACAAAAATCCATTATCCGTGTACAGTTTCCAGATGAGGATTCCT 1355
 Qy 361 GlnGlyValPheLeuProSerGluProThrSerAlaLeuTyrGluPheValSerAlaAla 380

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Db      1356 CAAGTGTCTCTTCTACCTTCGAGCCCACTAGTCTCTTTATGAGTTTGAGCCGACGC 1415
Qy      381 LeuLysGluProSerLeuGluPheGluLeuLeuHisProValLeuValLysLysArgVal 400
Db      1416 TTAAGGGAACCAAGCTTAGAGTTTCAATTTGTACATCCGTTGCTTTTAAAAAGCGGTG 1475
Qy      401 IleProHisPheProAlaAlaGlyGluArgAlaValThrValGluGluGluAspLeuVal 420
Db      1476 ATTCCTCCATTTTCCAGCTGCTGGGAGAGGCTGTAAACGTTGAAGAGGAGAGATTGGTT 1535
Qy      421 ProAlaAlaLeuLeuLysPheLysProIleGluThrAspSerValValPheThrGlyLeu 440
Db      1536 CTTCGAGCTCTACTCAAAATTTAAACCTATCGAAACAGATTCTGTGTGTTTACTGGTCTT 1595
Qy      441 CysAsnGluLeuLeuGluIleSerGluProLeuGluThrGlySerValAlaSerSer 459
Db      1596 TGTAAATGAGCTTCTTGAATTAACGAGCCCTCGAGACCGGATCAGTTGCTCTCTCG 1652
    
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RESULT 2
ADF38002
ID      ADF38002 standard; cDNA; 1729 BP.
XX
AC      ADF38002;
XX
DT      12-FEB-2004 (first entry)
XX
DE      Synchronised tobacco BY2 cDNA sequence SEQ ID NO:61.
XX
KW      identification; validation; plant; agrochemical; gene; ss.
XX
OS      Nicotiana tabacum.
XX
PN      WO2003085115-A2.
XX
PO      16-OCT-2003.
XX
PF      08-APR-2003; 2003WO-EP003703.
XX
PR      10-APR-2002; 2002EP-00447062.
PR      15-JUL-2002; 2002US-0396124P.
XX
PA      (CROP-) CROPPDESIGN NV.
XX
PI      Inze D, Broekaert W;
XX
DR      WPI; 2003-804308/75.
XX
PT      Identifying and validating plant genes or proteins as targets for
PT      agrochemicals, useful for producing agrochemical-resistant plants,
PT      comprises determining and down regulating the gene or protein expression
PT      profiles of a plant.
XX
PS      Claim 12; SEQ ID NO 61; 183pp; English.
XX
CC      The present invention describes a method for identifying and validating
CC      plant genes/proteins as targets for agrochemicals comprising determining
CC      the gene or protein expression profiles of a plant and downregulating the
CC      expression of the gene or protein in the plant or plant cell. Also
CC      described: (1) methods for screening candidate agrochemical compounds,
CC      comprising the use of the above method or the use of any of the 785 fully
CC      defined nucleotide sequences (ADF37942 to ADF38726) or protein sequences,
CC      or their homologues, functional fragments or derivatives; (2) a method
CC      for producing an agrochemical resistant plant, comprising the use of the
CC      above-mentioned nucleotide or protein sequences; (3) an isolated nucleic
CC      acid that is identified by any of the above methods or that comprises at
CC      least a part of a nucleic acid sequence chosen from any of the 785
CC      nucleotide sequences given in the specification; (4) a plant tolerant to
CC      an agrochemical, in which the expression level of one or more of the
CC      nucleic acid sequences given in the specification is modulated; and (5) a
CC      harvestable part of the plant described above. The method is useful in
CC      identifying and validating plant targets for agrochemicals or in
CC      producing an agrochemical resistant plant. The nucleic acid or protein
CC      can be used as a target for an agrochemical compound, particularly
CC      herbicide. The present sequence represents a synchronised tobacco BY2
CC      cDNA nucleotide sequence which is used in the exemplification of the
CC      present invention.
XX
SQ      Sequence 1729 BP; 527 A; 301 G; 391 T; 0 U; 0 Other;
    
```

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Query Match      100.0%; Score 1380; DB 10; Length 1729;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1380; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
    
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Qy 1 ATGGGTGACATGAAGATAAAGTCAAGGGTTCATGAAAAAGTACATCTCTCTTCA 60
Db 276 ATGGGTGACATGAAGATAAAGTCAAGGGTTCATGAAAAAGTACATCTCTCTTCA 335
Qy 61 GGTAAAGTTTAAAGGCCAAGGTAGGGTTTTGGGTGGTTCATCTCTTCAGGACCCCTCAAT 120
Db 336 GGTAAAGTTTAAAGGCCAAGGTAGGGTTTTGGGTGGTTCATCTCTTCAGGACCCCTCAAT 395
Qy 121 CATGTCAATAATTTTTCATCACAATCCCCAAATACAAGCCAAGATCAACAACCTTCATAT 180
Db 396 CATGTCAATAATTTTTCATCACAATCCCCAAATACAAGCCAAGATCAACAACCTTCATAT 455
Qy 181 ACAAAAACCTCCCTCAAAAACCAAGTAATCTGATCAAGAATTGAGAAATATATGTGAA 240
Db 456 ACAAAAACCTCCCTCAAAAACCAAGTAATCTGATCAAGAATTGAGAAATATATGTGAA 515
Qy 241 ATTTCAGTTTCAACAAAAGTGAATCAAGGATGGTTTTGATCATTGGTGAATTAGTCACT 300
Db 516 ATTTCAGTTTCAACAAAAGTGAATCAAGGATGGTTTTGATCATTGGTGAATTAGTCACT 575
Qy 301 TCTGGGAAGAGAAACCCAAAAGGGTATTCACTTACTAAATGTGTGAAATGCCCTGTCTGT 360
Db 576 TCTGGGAAGAGAAACCCAAAAGGGTATTCACTTACTAAATGTGTGAAATGCCCTGTCTGT 635
Qy 361 GGTAGTGGTTTTGTCTGAAGAAGAGGTGTCAACTCATATGATAGCTGTTTAAGTTCT 420
Db 636 GGTAGTGGTTTTGTCTGAAGAAGAGGTGTCAACTCATATGATAGCTGTTTAAGTTCT 695
Qy 421 GAAGTGTCTTCAATTTGGGAGTTGAAAGTAAAGTTGAAGTAAAAAGTAATTGGAACA 480
Db 696 GAAGTGTCTTCAATTTGGGAGTTGAAAGTAAAGTTGAAGTAAAAAGTAATTGGAACA 755
Qy 481 TGTGTAGTGCATATGTTTCAGGGAAGCCCTCAGAAGGGTCAGTTGAAGTGGTCAATTAAG 540
Db 756 TGTGTAGTGCATATGTTTCAGGGAAGCCCTCAGAAGGGTCAGTTGAAGTGGTCAATTAAG 605
Qy 541 TTGTTAAAGAAATATTGTGAAGGAACGAGAAGATGCCAAGTTTAAAGAAAATAGGATGGG 600
Db 816 TTGTTAAAGAAATATTGTGAAGGAACGAGAAGATGCCAAGTTTAAAGAAAATAGGATGGG 875
Qy 601 AATCCAAAATTAAGAGGTGCTATAGTGATGTTGTAGGAGGAGTGGAGCTATGGAATTT 660
Db 876 AATCCAAAATTAAGAGGTGCTATAGTGATGTTGTAGGAGGAGTGGAGCTATGGAATTT 935
Qy 661 GTTGGATTTGAGTTGAAAGGAAGAGGTGGGAAAATTTGGGCTGTGATGATGTTCTCTCT 720
Db 936 GTTGGATTTGAGTTGAAAGGAAGAGGTGGGAAAATTTGGGCTGTGATGATGTTCTCTCT 995
Qy 721 GAAGAACCACTTGTATGCTTAAGAAATGATTTTCACTCTTGAACCGAAGAGGTGAA 780
Db 996 GAAGAACCACTTGTATGCTTAAGAAATGATTTTCACTCTTGAACCGAAGAGGTGAA 1055
Qy 781 GAGTTGGGCTCCTTATCCCAAGTTAAGGCGAGTGAACCAAGTGAAGCCGAAGAGATGAT 840
Db 1056 GAGTTGGGCTCCTTATCCCAAGTTAAGGCGAGTGAACCAAGTGAAGCCGAAGAGATGAT 1115
Qy 841 AGACAGATTGAGGTGTTCTTTTCTGTTCCCGAGAGCGTAGCAGCAAAAATGAGCTACCT 900
Db 1116 AGACAGATTGAGGTGTTCTTTTCTGTTCCCGAGAGCGTAGCAGCAAAAATGAGCTACCT 1175
Qy 901 GATTCTCTCTTTAACTCTCACTGAGGAATTGAGAAGAGAAGCAGAGATGAGGAAGAAG 960
Db 1176 GATTCTCTCTTTAACTCTCACTGAGGAATTGAGAAGAGAAGCAGAGATGAGGAAGAAG 1235
Qy 961 AAATTAGAAGATTCCAATATATTGATTCCTAAATCTTATCGGGAAGAGCAGCAAAAGCT 1020
Db 1236 AAATTAGAAGATTCCAATATATTGATTCCTAAATCTTATCGGGAAGAGCAGCAAAAGCT 1295
Qy 1021 GCAAGGAAGAAGTACACAAAATCCATTATCCGTTACAGATTCCAGATGGAGCATTGCTT 1080
Db 1296 GCAAGGAAGAAGTACACAAAATCCATTATCCGTTACAGATTCCAGATGGAGCATTGCTT 1355
Qy 1081 CAAGTGTCTTCTTACCTTCGGAGCCAAGTAGTGTCTTATAGTAGTTTGTGAGCGCAGCG 1140
Db 1356 CAAGTGTCTTCTTACCTTCGGAGCCAAGTAGTGTCTTATAGTAGTTTGTGAGCGCAGCG 1415
Qy 1141 TTAAGGAACCAAGCTTAGAGTTGGAATGTACATCCGGTCTGTTGTAAGAAAGCGGGT 1200
Db 1416 TTAAGGAACCAAGCTTAGAGTTGGAATGTACATCCGGTCTGTTGTAAGAAAGCGGGT 1475
Qy 1201 ATTCCCAATTTCCAGCTGCTGGGAGAGGGCTGTAAACAGTTGAAGAGGAGGATTGGTT 1260

Art Unit: 1638

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Db      1476 ATTCCCATTTTCCAGCTGCTGGGAGAGGGCTGTAAACAGTTGAAGAGGAGGATTGGTT 1535
Qy      1261 CCTGCAGCTCTACTCAAATTTAAACCTATCGAAACAGATTCGTGTGTTTACTGGTCTT 1320
      |||
Db      1536 CCTGCAGCTCTACTCAAATTTAAACCTATCGAAACAGATTCGTGTGTTTACTGGTCTT 1595
Qy      1321 TGTAAATGAGCTTCTTGAATTTAGCGAGCCCTCGAGACCGGATCAGTTGCTTCTCGTAA 1380
      |||
Db      1596 TGTAAATGAGCTTCTTGAATTTAGCGAGCCCTCGAGACCGGATCAGTTGCTTCTCGTAA 1655

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RESULT 2
US-10-510-871-61
; Sequence 61, Application US/10510871
; Publication No. US20050221290A1
; GENERAL INFORMATION:
; APPLICANT: INSE, DEK
; APPLICANT: BROCKHAERT, MILLEN
; TITLE OF INVENTION: IDENTIFICATION AND VALIDATION OF NOVEL TARGETS FOR AGROCHEMICALS
; FILE REFERENCE: 4559-045163
; CURRENT APPLICATION NUMBER: US/10/510,871
; CURRENT FILING DATE: 2004-10-08
; PRIOR APPLICATION NUMBER: PCT/EP03/03703
; PRIOR FILING DATE: 2003-04-08
; PRIOR APPLICATION NUMBER: EP 02447062.7
; PRIOR FILING DATE: 2002-04-10
; PRIOR APPLICATION NUMBER: US 60/396,124
; PRIOR FILING DATE: 2002-08-01
; NUMBER OF SEQ ID NOS: 794
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 61
; LENGTH: 1729
; TYPE: DNA
; ORGANISM: Unknown Organism
; FEATURE:
; OTHER INFORMATION: polynucleotide sequence that is cell cycle modulated or
; OTHER INFORMATION: involved in the cell cycle process
US-10-510-871-61

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Alignment Scores:
Pred. No.:      2,25e-222      Length:      1729
Score:          2310.00      Matches:      459
Percent Similarity: 100.0%      Conservative: 0
Best Local Similarity: 100.0%      Mismatches: 0
Query Match:    100.0%      Indels:      0
Db:            11      Gaps:      0

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US-10-583-212-2 (1-459) x US-10-510-871-61 (1-1729)

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Qy      1 MetGlyAspMetLysAspLysValLysGlyPheMetLysLysValThrSerSerSerSer 20
      |||
Db      276 ATGGGTGACATGAAGGATAAAGTCAAGGGTTCATGAAGGATGACATCTTCTCTTCA 335
Qy      21 GlyLysPheLysGlyGlnGlyArgValLeuGlyGlySerSerSerSerGlyProSerAsn 40
      |||
Db      376 GGTAAATTTAAAGGCCAAGGTAGGGTTTGGGTGGTTCATCTTCTTCAGAGCCCTCAAA 395
Qy      41 HisValAsnAsnPheSerSerHisProLeuAsnThrArgGlnAsnGlnProSerTyr 60
      |||
Db      396 CATGTCAATATTTTTCATCACATCCCTTAAATACAGGCAAGATCAACCACTTCATAT 455
Qy      61 ThrLysThrSerProGlnLysProSerAsnSerAspGlnArgLleGluAsnLleCysGlu 80
      |||
Db      456 ACAAAAATTCGCTCAAAAGCAAGTAATTCGTGATCAAGGATTGGAATATATGTGAA 515
Qy      81 IleGlnPheAsnSerGluGlySerLysAspGlyPheAspProPheGlyGluLeuValThr 100
      |||
Db      516 ATTCAGTTCAACAAAGTGAAATCAAGGATGGTTTGTATCCATTTGGTGAAATGATCACT 575
Qy      101 SerGlyLysArgAsnProLysGlyTyrSerLeuThrAsnValPheGluCysProValCys 120
      |||
Db      576 TCTGGGAGAGAGAAACCAAGAGGATTCACCTACTAATGTGTGTGAATGCCCTGTCTGT 635
Qy      121 GlySerGlyPheValSerGluGluValSerThrHisIleAspSerCysLeuSerSer 140
      |||
Db      636 GGTAGTGGTTTGTCTTGAAGGAGAGGTTCAACTCATATTGATAGCTGTTTAAGTCTCT 695
Qy      141 GluValSerSerAsnLeuGlyValGluSerLysValGluValLysSerGluLeuGluThr 160
      |||
Db      696 GAAGTGTCTTCTAATTTGGGAGTTGAAGTAAAGTGAAGTAAAGTGAATTTGAAGAA 755
Qy      161 CysValSerAlaTyrValSerGlyLysProSerGluGlySerValGluValValIleLys 180

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Db      756 TGTGTAGTGCATATGTTTCAAGGAGCCCTCAGAAAGGCTGAGTGTGCTATTAA 815
Qy      181 LeuLeuLysAsnIleValLysGluProGluAsnAlaLysPheArgLysIleArgMetGly 200
Db      816 TTTTAAAGAAATATTGTGAAGAACCAAGAGATGCCAAGTTTAGCAAAATAGAGATGGG 875
Qy      201 AsnProLysIleLysGlyAlaIleGlyAspValValGlyGlyValGluLeuLeuGluPhe 220
Db      876 AATCCAAAAATAAAGGCTGCTATAGTGTGATGTTGTAGAGAGCGTGGAGCTATTGGAATT 935
Qy      221 ValGlyPheGluLeuLysGluGluGlyGluIleTrpAlaValMetAspValProSer 240
Db      936 GTTGGATTGAGTTGAAGAAAGAAAGTGGGAAAATTTGGCTGTGATGGATGTTCTCTCT 995
Qy      241 GluGluGlnLeuValMetLeuLysAspValValSerLeuLeuGluProLysLysValGlu 260
Db      996 GAAGAACCACTTGTATCTTAAAGAAATGATGTTTCACTCTTGAACCGAAGAGGTTGAA 1055
Qy      261 GluLeuAlaSerLeuSerGlnValLysAlaSerGluProValGluProLysLysIleAsp 280
Db      1056 GAGTTGGCTCTCTTATCCCAAGTTAAAGCGAGTGAACAGTTGAGCCGAAGAGATTGAT 1115
Qy      281 ArgGlnIleArgValPhePheSerValProGluSerValAlaAlaLysIleGluLeuPro 300
Db      1116 AGACAGATTGAGGTGTTCTTTCTGTTCCCGAGAGCGTAGCAGCAAAATTTGAGCTACCT 1175
Qy      301 AspSerPhePheAsnLeuSerArgGluGluLeuArgArgGluAlaGluMetArgLysLys 320
Db      1176 GATTCTCTCTTTAACTCTCTCAGTGAGGAATTGAGAGAGAGCAGAGATGAGGAAGAG 1235
Qy      321 LysLeuGluAspSerLysLeuLeuLeuProLysSerTyrArgGluLysGlnAlaLysAla 340
Db      1236 AAATTAGAAAGTTCCAAATATTGATTTCTTAAATCTTATCGGAAAGCAGCAAAAGCT 1295
Qy      341 AlaArgLysLysTyrThrLysSerIleIleArgValGlnPheProAspGlyAlaLeuSer 360
Db      1296 GCAAGAAAGAGATACACAAATCCATTATCCGTGTACAGTTTCCAGTGAGCATTGCTTT 1355
Qy      361 GlnGlyValPheLeuProSerGluProThrSerAlaLeuTyrGluPheValSerAlaAla 380
Db      1356 CAAGGTGCTTCTTACCTTGGAGCCCACTAGTGCTCTTATGAGTTTGTGAGCCAGCG 1415
Qy      381 LeuLysGluProSerLeuGluPheGluLeuLeuHisProValLeuValLysLysArgVal 400
Db      1416 TTAAGGAACCAAGCTTAGAGTTGGAATTGTACATCCGCTGCTTTGTTAAAAAGCGGTG 1475
Qy      401 IleProIlePheProAlaAlaGlyGluArgAlaValThrValGluGluGluAspLeuVal 420
Db      1476 ATTCCCACTTTCCAGCTGCTGGGAGAGGGCTGTACAGTTGAAGAGAGAGATTGGTT 1535
Qy      421 ProAlaAlaLeuLeuLysPheLysPheProIleGluThrAspSerValValPheThrGlyLeu 440
Db      1536 CCGCAGCTCTACTCAAATTTAAACCTATCGAAACAGATTCGTGTGTTTACTGGTCTT 1595
Qy      441 CysAsnGluLeuLeuGluIleSerGluProLeuGluThrGlySerValAlaSerSer 459
Db      1596 TGTAAATGAGCTTCTTGAATTTAGCAGGCCCTCGAGACCGGATCAGTTGCTCTCTCG 1652

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RESULT 2
US-10-510-871-61
; Sequence 61, Application US/10510871
; Publication No. US20050221290A1
; GENERAL INFORMATION:
; APPLICANT: INZE, DIKE
; APPLICANT: BROCKHAERT, WILLEM
; TITLE OF INVENTION: IDENTIFICATION AND VALIDATION OF NOVEL TARGETS FOR AGROCHEMICALS
; FILE REFERENCE: 4850-045163
; CURRENT APPLICATION NUMBER: US/10/510,871
; CURRENT FILING DATE: 2004-10-08
; PRIOR APPLICATION NUMBER: PCT/EP03/03703
; PRIOR FILING DATE: 2003-04-08
; PRIOR APPLICATION NUMBER: EP 02447062.7
; PRIOR FILING DATE: 2002-04-10
; PRIOR APPLICATION NUMBER: US 60/396,124
; PRIOR FILING DATE: 2002-08-01
; NUMBER OF SEQ ID NOS: 794
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 61
; LENGTH: 1729
; TYPE: DNA
; ORGANISM: Unknown Organism

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FEATURE:									
OTHER INFORMATION: polynucleotide sequence that is cell cycle modulated or									
OTHER INFORMATION: involved in the cell cycle process									
US-10-510-871-61									
Query Match		100.0%	Score 1380;	DB 11;	Length 1729;				
Best Local Similarity		100.0%	Pred. No. 0;						
Matches 1380;	Conservative	0;	Mismatches	0;	Indels	0;	Gaps	0;	
Qy	1	ATGSGTGACATGAAGCATAAAGCATCAAGSGGTTCATGAAAAAGGACACATCTTCTTCTTCA	60						
Db	276	ATGSGTGACATGAAGCATAAAGCATCAAGSGGTTCATGAAAAAGGACACATCTTCTTCTTCA	335						
Qy	61	GGTAGTTTTAAAGGCCAAGTAGSGTTTTGGGTGGTTCATCTTCTCAGGACCCCTCAAAT	120						
Db	336	GGTAGTTTTAAAGGCCAAGTAGSGTTTTGGGTGGTTCATCTTCTCAGGACCCCTCAAAT	395						
Qy	121	CATGTGCAATATTTTTCATCACATCCCCAAATCAACGAAGCAGATCAACAACCTTCATAT	180						
Db	396	CATGTGCAATATTTTTCATCACATCCCCAAATCAACGAAGCAGATCAACAACCTTCATAT	455						
Qy	181	ACAAAACATTCGCCCTCAAAAACCAAGTAATCTGTATCAAGAATTGAGAAATATATGTGAA	240						
Db	456	ACAAAACATTCGCCCTCAAAAACCAAGTAATCTGTATCAAGAATTGAGAAATATATGTGAA	515						
Qy	241	ATTCAAGTCCACAAAAGGTGAATCAAGAAGTGGTTTGATCAAGTTTGGTGGAATTCAGTCACT	300						
Db	516	ATTCAAGTCCACAAAAGGTGAATCAAGAAGTGGTTTGATCAAGTTTGGTGGAATTCAGTCACT	575						
Qy	301	TCGGGAGAGAAACCAAAAGSGATTACACTATCTAATGTGTTTGAAAGCCCTGTCTGT	360						
Db	576	TCGGGAGAGAAACCAAAAGSGATTACACTATCTAATGTGTTTGAAAGCCCTGTCTGT	635						
Qy	361	GGTAGTGGTTTTGTTTTTCAGAGAAAGSGTGTCAACTCATATTAATGATAGCTGTTTAAGTTCT	420						
Db	636	GGTAGTGGTTTTGTTTTTCAGAGAAAGSGTGTCAACTCATATTAATGATAGCTGTTTAAGTTCT	695						
Qy	421	GGAGTGCTCTCTAATTGGGAGTGAAGATTAAGTGAAGTAAATGGATTTGGAAGTCA	480						
Db	696	GGAGTGCTCTCTAATTGGGAGTGAAGATTAAGTGAAGTAAATGGATTTGGAAGTCA	755						
Qy	481	TGTGTAGTCGATATGTTTCAGAGGAAGCCCTCAGAGGGTCAGTTGAAGTGGTCAATTAAG	540						
Db	756	TGTGTAGTCGATATGTTTCAGAGGAAGCCCTCAGAGGGTCAGTTGAAGTGGTCAATTAAG	815						
Qy	541	TGTTAAGGAATTTGTGAAGGAACAGAGAATGCCAGTTTAGGAAATATAGGATGGGG	600						
Db	816	TGTTAAGGAATTTGTGAAGGAACAGAGAATGCCAGTTTAGGAAATATAGGATGGGG	875						
Qy	601	AATCAAAAATAAAAGGCTCTATAGSTGATGTTGTAGAGAGAGTGAGCTATTGGAATTT	660						
Db	876	AATCAAAAATAAAAGGCTCTATAGSTGATGTTGTAGAGAGAGTGAGCTATTGGAATTT	935						
Qy	661	GTGGGTTGAGTTGAAGGAAGAGAGTGGGAGAAATGGGGTGTGATGGATGTCTCTCT	720						
Db	936	GTGGGTTGAGTTGAAGGAAGAGAGTGGGAGAAATGGGGTGTGATGGATGTCTCTCT	995						
Qy	721	GAGACACACTGTGTTATGCTTAAGATGTAGTTTCACTCTTGGACCGCAAGAGGTGAA	780						
Db	996	GAGACACACTGTGTTATGCTTAAGATGTAGTTTCACTCTTGGACCGCAAGAGGTGAA	1055						
Qy	781	GAGTGGCGCTCTTATCCCAAGTTAAGCGAGTGAACAGTTGAGCCGAGGAAGATGAT	840						
Db	1056	GAGTGGCGCTCTTATCCCAAGTTAAGCGAGTGAACAGTTGAGCCGAGGAAGATGAT	1115						
Qy	841	AGACAGATTCGAGTGTCTTTTCTGTGTCGCCGAGCGGTACGACCAAAATTAGCTACTCT	900						
Db	1116	AGACAGATTCGAGTGTCTTTTCTGTGTCGCCGAGCGGTACGACCAAAATTAGCTACTCT	1175						
Qy	901	GATTCTCTCTTAACCTCTCAGCGTAGGAATTAGGAAGAAGCAGAGATGAGGAAGAG	960						
Db	1176	GATTCTCTCTTAACCTCTCAGCGTAGGAATTAGGAAGAAGCAGAGATGAGGAAGAG	1235						
Qy	961	AAATTAGGAAGTCCAAATATTATGATCTCTAAATCTTTAGCGGAAGAAGGCAAAAGCT	1020						
Db	1236	AAATTAGGAAGTCCAAATATTATGATCTCTAAATCTTTAGCGGAAGAAGGCAAAAGCT	1295						
Qy	1021	GCAGGAAGGAAGTACACAAATCATTAATCGTGTACAGTTTCAGATGGAGCATGTCT	1080						
Db	1296	GCAGGAAGGAAGTACACAAATCATTAATCGTGTACAGTTTCAGATGGAGCATGTCT	1355						
Qy	1081	CAAGTGCTGTTCTTACTCTCGAGACCAACTGAGTCTTTATGAGTTTGTGAGCGAGGCT	1140						

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Db      1356 CAAGTGTCTTTCTACCTTCGGAGCCAAGTGTCTCTTTATGAGTTTGTGAGCGCAGCG 1415
Qy      1141 TTAAGGAACCAAGCTTAGAGTTCGAATGTTCACATCCGGTGCTTGTAAAAAGCGGGTG 1200
      |||
Db      1416 TTAAGGAACCAAGCTTAGAGTTCGAATGTTCACATCCGGTGCTTGTAAAAAGCGGGTG 1475
Qy      1201 ATTCCCATTTTCAGCTGCTGGGGAGAGGGCTGTAAAGTTGAAGAGGAGGATTGTGGT 1260
      |||
Db      1476 ATTCCCATTTTCAGCTGCTGGGGAGAGGGCTGTAAAGTTGAAGAGGAGGATTGTGGT 1535
Qy      1261 CCTGCAGCTCTACTCAAATTTAAACCTATCGAAACAGATTCTGTGTGTTTACTGGTCTT 1320
      |||
Db      1536 CCTGCAGCTCTACTCAAATTTAAACCTATCGAAACAGATTCTGTGTGTTTACTGGTCTT 1595
Qy      1321 TGTAAATGAGCTTCTTGAAATTAGCGAGCCCTCGAGACCGGATCAGTTGCTTCTCGTAA 1380
      |||
Db      1596 TGTAAATGAGCTTCTTGAAATTAGCGAGCCCTCGAGACCGGATCAGTTGCTTCTCGTAA 1655
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Applicants point out that in response to the prior rejection, claim 4 has been amended to recite: “A method for improving plant growth characteristics, said method comprising introducing and expressing in a plant an isolated nucleic acid molecule encoding a GRUBX protein, said GRUBX protein consisting of the amino acid sequence set forth in SEQ ID NO:2.”. Applicants maintain that with respect to INZE et al. I being treated as a section 102(a) reference, that INZE et al. I does not teach a method of improving plant characteristics via introduction and expression of a nucleic acid molecule encoding a protein consisting of the amino acid sequence set forth in SEQ ID NO:2. (reply pages 11-12)

The Examiner maintains that both INZE et al. I and II anticipate the rejected claims, as the recitation in the preamble of claim 4 is an intended use for the claimed method, and thus not limiting. The Examiner also maintains that the nucleic acid molecule taught by INZE et al. I and II encodes a protein consisting of the amino acid sequence set forth in SEQ ID NO:2, as evidenced by the start and stop codons of SEQ ID NO:61.

Remarks

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Collins whose telephone number is (571) 272-0794. The examiner can normally be reached on Monday-Friday 8:45 AM -5:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cynthia Collins/
Primary Examiner, Art Unit 1638

CC